FESSENDEN'S

SILK MANUAL

AND

PRACTICAL FARMER.

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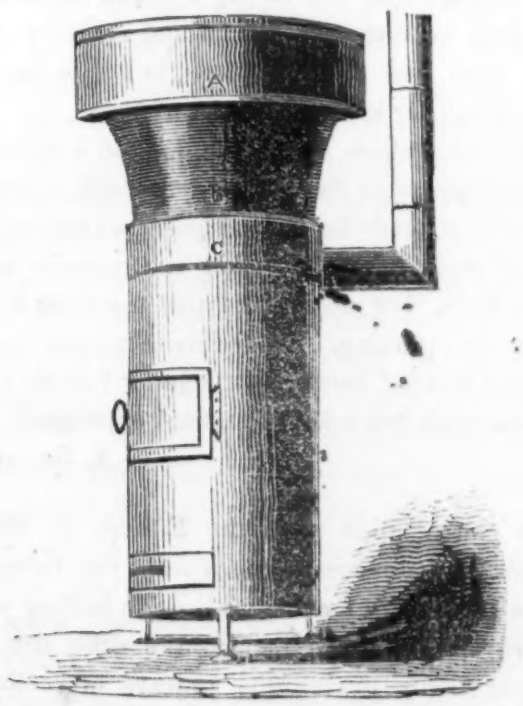
BOSTON, NOVEMBER, 1835.

FACTS AND OBSERVATIONS RELATIVE TO THE CULTURE OF SILK.



HEATING COCOONS FOR REELING SILK.

In the last number of our Silk Manual, page 82, we gave a brief notice of an apparatus, invented by the Editor, for the purpose of heating cocoons for reeling silk; and promised a more definite description of our invention in a succeeding number. We now proceed to redeem our pledge.

A. in the cut, represents a vessel which may be made of tin, copper, or other suitable material.* The top, or visible part is about five and a half inches high, and sixteen inches in diameter. Its bottom is closed, in part, by a plate of the same metal, turning horizontally inwards, so as to form a shoulder, which rests on the upper edge of the boiler *B.* This plate is perforated by a circular hole, about ten and a half inches in diameter, and a short open cylinder of two inches in length, is soldered to the edge of the hole or perforation above-mentioned. The lower edge of this short cylinder rests in a shallow, horizontal groove in the interior of the boiler, about two inches below its top, or upper extremity. This groove, as soon as the water is made to boil, is filled with water of condensed steam, which effectually prevents the escape of steam from the boiler before it is conducted up the sides of the cylinders, above described, and the little steam, which is not condensed on its passage by said cylinders, and a vessel which contains the cocoons, to be hereafter described, escapes from the edge of the upper cylinder.

The cocoon-heater, or vessel containing the water for heating the cocoons is a short cylinder placed within that which has been described, and is not shown in the above cut, closed at the bottom, and resting on the edge of the exterior vessel or steamer, by a rim or flange. About a quarter of an inch of space is left between the steamer and the cocoon-heater, for the purpose of admitting steam from the boiler to heat the vessel containing the cocoons. The cylinder in which the cocoons are heated is divided into four parts by tin partitions, which cross each other at right

* In warm weather, or whenever warming the apartment is not desired, this vessel may be of wood, lined inside.

angles near the centre of the cylinder. The partitions are perforated by small holes, which admit water from each to the other, but keep different parcels of the cocoons separate, which is said to be necessary in reeling.

The lower part of the boiler *B*, which is of cast iron, is let into the cylinder *C*, resting on a flange or shoulder, and extending downwards to the top of the door by which fuel is admitted. The cylinder, fire pot, ash pit, and stove pipe have nothing peculiar in their construction, except that there is more perpendicular space above the fire door than usual, for the purpose of affording room for the boiler. For further observations on this apparatus, and notices of its advantages, we would refer to the Silk Manual for the last month, page 82.

This apparatus has been used by Mr Cobb, author of *Cobb's Silk Manual*, who has favored us with the following:

I have used Mr Thomas G. Fessenden's Patent Steam Boiler for heating the water in reeling silk, and find it both economical and useful. The water in which the cocoons are, is kept equable by means of the application of steam to the basin, and there is a considerable saving of labor and fuel by the apparatus. J. H. COBB.

Dedham, July 12th, 1835.

The apparatus may also be usefully applied in killing the chrysalis in the cocoons, and also for drying cocoons before bringing them to market as will be apparent from the following communication from the pen of Mr Adam Brooks, inventor of Brooks' Patent Silk Spinner.

[For the Silk Manual.]

The disappointment that many have met with by not knowing that cocoons must be dryed before they are packed away for spinning, induces me to write a few lines on the subject. Some of my acquaintance have recently lost a number of bushels; others small quantities. I was informed in Connecticut that one man lost thirty bushels, and many have written to me for information, that a few observations which I have ever found necessary to be attended to, in order to insure success, cannot be unwelcome. Let the cocoons be baked, care being taken not to have the oven too hot, or stifling them is preferable, as then they cannot be hurt by burning.

Thomas G. Fessenden, Editor of the New England Farmer, has an apparatus for warming rooms, which has been advertised in that most useful paper. This will be found a convenience indeed for killing the chrysalis, as well as useful for many other purposes, having a pan* affixed to it to heat by boiling water, which is exactly what we want for killing the moth. Let them be heated in this pan about half an hour; when they are warm, put into the pan a very little camphorated spirits, and they may be kept for years, and no insect will injure them. When they are taken out, spread them on a cloth, or smooth boards; if it is damp weather and you have a large parcel, spread them thin in an open room, and stir them about as often as once a day, or the under side will mould and spoil the silk; or they may be dryed in the same pan that the chrysalis is killed in, if we dry a few at a time. If we have a clear sun, it is a better way to lay them in the sun and dry them until they feel light and rattle by shaking; then, and not until then, is it safe to pack them away for spinning or for market.

The stove above alluded to, is also a most convenient apparatus for spinning the silk, there is a pan with it, made for that purpose, set into another pan of water,† that the water the cocoons are in never boils, but may be kept of the right temperature for spinning. With this necessary apparatus, and Brooks' Patent Silk Spinner I could insure success with but a little practical experience.

A. Brooks.

In conversation with the Editor, Mr Brooks suggested that some cocoons wind the better for being immersed, for a short time in boiling water, before attempting to reel off the silk; and then placing them, during the process of reeling in water of a somewhat lower temperature. This can easily and readily be effected by taking off the steamer *A*, together with the cocoon-heater, raising the temperature of the water in the cast iron boiler *B*, to a boiling heat, and immersing

* This pan is the vessel described above as the cocoon heater.

† Or rather over a boiler, and heated by steam.

the cocoons, for a short time in the boiling water, and then placing them in the steam heated water for winding.

Rush's Silk Manual observes, that "The temperature of the water is to be regulated, 1st by the nature of the silk, resulting in part, from the quality of the food on which the silk-caterpillars have been fed. This is exemplified in a striking manner by a fact recorded by Aldini, which is, that in Piedmont and in Lombardy, the gummy cement of the cocoons is so easily soluble as to require the water to be heated only to 60° or 66° of Reaumer (168° 181° of Fahrenheit,) while the cocoons spun in the south of Italy, and particularly in the Papal territories, require a heat of 80° of R. (212 of F.) owing to the greater tenacity and solidity of the gum. Experiments can alone, therefore, determine the various degrees of heat requisite for the water in different places, and for several varieties of cocoons, and even for different parcels of cocoons of the same sort. As this is a point connected with the success of the operation, it affords another argument for the use of the thermometer, in order to ensure it, and to prevent the delay and trouble which will ever ensue from guessing at the heat of the water, by dipping the finger in it. Our own sensations are very inaccurate tests of the heat of water; the use of the thermometer, besides saving much time and trouble to the spinner, will ensure an evenness of thread, and perfection in the whole operation."

Dr Lardner observes that, "it is considered essential to the production of good silk, that the thread should have lost part of its heat and adhesiveness before it touches the bar of the reel. For this reason the Piedmontese reelers are obliged by law to allow a distance of three feet between the guides and the centre of the reel." This, as well as many other apparently insignificant matters, is, no doubt, indispensible to success in reeling; and the manufacturer must be "*great in little things*" or he will not be successful in the great objects connected with his pursuits.

For Fessenden's Silk Manual.

Mr Editor — Having embarked in the silk culture, and being desirous that others should do the same, I am pleased to see the public press wielding a portion of its energies in the service of this enterprise. And what is attempted in the way, I shall wish, by all means, to see, not only prompted by zeal, but undertaken with prudence and judgment. This branch of agricultural industry is, at present, in an early stage of experiment, in this country, at least in most parts of it. Few have had much opportunity to acquire knowledge by their own experience; and, consequently, few are qualified to be teachers, or to impart valuable information to enlighten and guide the cultivator, or to awaken and direct attention upon this important subject. Not a few, however, seem ambitious to lend a helping hand, by publishing the result of their speculations, and sometimes stating observations and opinions ostensibly grounded on known facts. Much, however, of this character, and presented in this form, needs revision. I have, myself, for about six years past, been in the habit of consulting books, reading newspapers and periodicals, and what I esteem vastly better than all the rest, gleaning something from personal experience, for the purpose of getting an understanding of the art of rearing the silk-worm and ascertaining its profits. And I do not now, Mr Editor, sit down to pen this short article with any high pretensions, to palm myself upon your readers as a man qualified to teach them, to guide them to all the knowledge that is important to practice. My object is rather to guard against mistakes, to warn men not to receive as canonical, all the high-toned and extravagant representations of enthusiasts, who, I doubt not, esteem themselves public benefactors in proportion to the exalted terms in which they paint the prospect of all silk cultivators. My motive is derived from a belief, that sober facts, precisely reported, and well authenticated, are ultimately of infinitely greater advantage to the cause they seek to advance, than all the highly colored and flattering encomiums enlisted into the service by volunteers, who have more warmth than light, and more valor than experience. When led to expect more than it is possible we should ever realize, our disappointment, when it comes, must necessarily produce a most disastrous effect upon the engagement, into which we were seduced, or conducted at least, by an inordinate estimate of its advantages.

I am induced to offer these suggestions in consequence of having often met with paragraphs which I *know* to be incorrect, and which it seems to me, tend to mislead those, who would rather be enlightened than deceived upon this highly interesting practical subject. A few days since I read in the Transcript, from a correspondent of that paper, some remarks dated at Ashfield, in my own County, respecting the high condition to which silk cultivation had already risen in Northampton. I impute nothing intentional to the writer, whoever he may have been, but I will venture to say, that had he been a man of any knowledge concerning what he wrote, resting on his own experience, he would not have amused us with so fine, so splendid a picture. I, myself, have, since the first of June last, been twice on the same ground, which lit up such a glow of imagination in the mind of this traveller and journalist, and have found nothing to warrant his views. It is true there is, on the premises of Mr Whitmarsh, the beginning and foundation of a great silk establishment, which, in process of time, will, I doubt not, produce great results. But to say that even now there is provision for rearing "one or two millions of silk-worms," on that ground, as promising as it is, can be no other than extravagant and idle in the extreme. Nay, I seriously doubt whether, in the whole state of Massachusetts, their have been mulberry leaves enough, the season past, to yield one half as much silk as has been often, and by many, stated as coming within the capability of that single town. Now, such over statements and unauthorized estimates, made unquestionably, in simplicity and with the most laudable views, have no tendency to accelerate, but to retard, the progress of that enterprise, which is eventually, as I believe, to convert New England into a great and prosperous silk-growing district. What has been commenced in Northampton, as already referrrd to, may be regarded as a prelude to something very considerable, being, as it is, in the hands of a gentleman who is persevering, and not likely to be broken down by the premature expenditure of some hundreds of dollars in the erection of accommodations, which, I am confident, cannot be more than partially needed for many years to come.

The way in which this business is most likely to succeed, and be a source of profit, is in a speedy commencement and a steady, gradual progress, by sowing seed, or otherwise procuring trees, for supplying food for worms, and when, in the course of two or three years, foliage shall have grown in some quantity, begin to feed them out on a moderate scale, increasing from year to year, as trees grow, and experimental knowledge strengthens confidence, and renders more easy and sure the process by which the end is to be attained. Daring adventurers may launch forth at once upon a wide ocean of untried and uncertain effort, expecting to reap an abundant, overflowing harvest almost as soon as the seed is sown; but, in this case, the mortification and discouragement attendant on disappointment is more probable than the gain fondly anticipated. For the present, I would say to the agricultural community disposed to make trial of silk-growing, first provide trees, as largely as you choose; and when they have leaves, begin to use them with due caution not to be overstocked, not to have more mouths than you can fill, not to crowd your thoughts, or your hurdles, with millions, when you have scarcely wherewith to sustain thousands.

The chief hazards in this novel and much talked of branch of rural industry are, I imagine, in the outside, before opportunity has been had for making up a well-formed and ripened judgment as to the proper mode of managing the concern.

To avoid this difficulty, and to acquire skill for practice in the cheapest way, and to make a disposition the least likely to issue in failure and discouragement, cultivators, I think, will do well to act upon something like what is hinted in the above remarks, rather than take their impressions from what is said so often, so confidently, and in language so flattering, while experience neither attests, nor seals it.

With these remarks, Mr Editor, I declare to you and your readers my sincere desire of seeing your useful publication accomplishing much in the promotion of its object, and in prompting to that industry which it recommends.

Boston, Oct. 21, 1835. J. Field.

To the Editor of the Silk Manual.

Sir—I am informed by those who have had experience in the cultivation of the mulberry tree, that it will not thrive on land where the surface or subsoil has a mixture of clay. Will you please to state in the next number of your valuable Manual, whether a calcareous soil or a soil composed in part of lime, would be suitable for a mulberry plantation; or whether lime applied to the land as manure, would be beneficial or injurious to the growth of the trees in any case. By so doing you will much oblige one of your subscribers, and perhaps, many others who are now interested in the culture of the mulberry.

Dedham, Oct. 30, 1835. W. G.

By the Editor.—All the writers on the subject of cultivating mulberry trees, &c. concur in recommending a warm, sandy, dry soil, and do not mention the subject of lime, or calcareous matter as connected with growing the trees. Lime, however, according to Mr Edmund Ruffin, author of an able "Essay on calcareous Manures," is unfavorable to the growth of forest trees in general. We should be glad to learn the opinions of competent judges on this subject; but, at present, would not advise the use of calcareous manure, nor recommend a calcareous soil till the subject is better understood.

ON THE MORUS MULTICAULIS, OR CHINESE MULBERRY.

To the Editor of the Northampton Courier:

Dear Sir:—My object in this communication is, in part, to rectify some few errors in a statement of your highly respected correspondent, Dr S., which was inserted in your valuable and interesting journal for Sept. 30, ult. and which is now going the rounds of many of the public journals of the day.

The history of this Mulberry, and the account of its origin, has been often published and republished in this country, during the last five years, and its history disseminated far and wide; the history being, in a measure identified in its name and the country of its origin: that country is China.

The honor of the discovery of this plant, and its introduction to Europe, to Africa, and to America, is due to M. S. Perrottet, Agricultural Botanist, and Traveller of the Marine and Colonies of France. This distinguished Botanist was sent out by the Government of France on a voyage of research to the seas of Asia: a national ship having been provided especially for his use. After an absence of about three years, and in 1822, he returned to France, bringing with him a vast collection of living plants, &c. "From the commencement of the present century," says a writer of that country in his letter to Dr Pascalis, and one who saw all, "there had never before been so vast an importation; one so extensive in number, for rare genera, and families or their seeds. * * * In this immense collection was the *Morus Multicaulis*, thus called by Perrottet, for the first time ascertained to be the *real Chinese Mulberry*, of which every silk grower and culturist should endeavor to multiply the species. It has been deposited in the Royal Garden." * * * *

It was in descending the river which traverses the city of Manilla, and on its banks, and in the garden of a Chinese cultivator, that M. Perrottet saw, for the first time, the Morus Multicaulis; it was there that he first found it, growing along with a vast variety of other precious plants, which had there been congregated from India, from Ceylon, from Sumatra, and from China.

The Morus Multicaulis, appears from the statements of M. Perrottet, to have originated "in the elevated regions of China, from whence it has been disseminated over all the plains near the sea shore. It was introduced into Manilla and all the Islands in the Asiatic Archipelago, from Canton, where it was only used for ornamenting gardens. The Chinese are entitled to the credit of this introduction, who, in emigrating from their country, have, from motives of industry, endeavored to multiply it, that they might render it useful to them in the new country of their adoption.

Again he says, "this species will be readily acclimated in Europe, because it originated from an analogous region, as to climate, to that which we inhabit. It appears not to suffer from the excessive cold of the Northern, or the intense heat of the intertropical regions" * * * Chinese inhabitants assured M. Perrottet, that to this tree are the disciples of Confucius indebted, for the prosperity and solidity of their empire.

In France, this tree is sometimes also called the *Perrottet Mulberry;* and M. Poiteau, one of the most distinguished writers of that country, has observed, that public gratitude and justice, require that the name of the zealous traveller should be affixed to the precious plant which has given him celebrity, and which he has given to Europe, to Africa, and to America, and which will contribute so much to the prosperity of French industry. In other publications he has also informed us, that, by the information received from all quarters, this mulberry had not suffered in the least in any part of France, during the most severe of their winters. Letters also of a late date, which I have received from M. Eyries of Havre, and also from the Chevalier Bodin of Paris, both of them the

most responsible as well as competent witnesses, are to the same effect.

Mr Editor, I add to this communication a still further account which I had very lately prepared for the second edition of the "Silk Grower's Guide"; the first edition of Sept. ult. being principally gone.

THE SILKWORM AND THE MULBERRY FROM CHINA.

Wherever the Mulberry finds a congenial climate and soil, there also the silk worm will flourish; such a climate and soil, and such a country is ours, throughout its whole extent, from its eastern to its western shores.

The silk worms, and the plants whereon they most delight to feed, are the natives of China: a country famous from antiquity for its silk, and renowned for its industry; a parallel only to our own, in its climates and divers latitudes. These, the *common White Mulberry*, which is sometimes, though improperly, called the Italian, and the *Morus Multicaulis*, all being alike the natives of the same country.

The Morus Multicaulis is also called, by way of excellence, *the Chinese Mulberry;* a tree of surpassing beauty; a new and most valuable variety for the nourishment of silk worms; a tree which is represented as possessing such decided superiority over all others, that it will speedily be substituted for them all in every region of the globe.

The tree grows vigorous, upright and beautiful; the leaves, in a dry and arid soil, are of less size and elliptical, their breadth being six inches, and their length eight; but in rich, friable and humid soils, they are large and cordiform, extraordinary specimens having sometimes measured more than a foot in breadth, and fifteen inches in length; they are invariably curled or convex on their upper surface, of a deep and beautiful shining green. A plant of the easiest culture, by grafting, by inoculating, by layers and by cutting, but we are assured *by no other mode*, as has been proved in France, in Lombardy, and in Venice, where the seeds sown have produced varieties, but *none like the true kind.* By the modes above-named only, and by these exclusively, as we are equally assured, have the Chinese reared this tree from time immemorial; this being a *variety.*

By these characteristics, is the true Morus Multicaulis distinguished, not only from the Dandolo mulberry, but also from another variety, which has been mistaken for this, and which I saw growing at Northampton, the seeds of which came from China. At first sight, I concluded they were the *Morettiana*, or Dondolo, a new species from Pavia, which, like these, has a large leaf, with a *plain surface*, but on examination I saw that they differed as much from this as they differ from the true kind.

It is sometimes called the *Morus Culcallata* — also the Perrottet mulberry, so called from M. Perrottet, agricultural botanist and traveller of the Marine and Colonies of France, who has introduced this plant to Europe. It was first discovered by him at Manilla, the capital of the Phillippine islands, whither it had been brought by the Chinese, as a tree of ornament, as well as of eminent usefulness. From Manilla the Morus Multicaulis was first introduced by M. Perrottet to the Isle of Bourbon, and finally it was brought by him to France in 1821, in that vast collection and variety of productions, which he had during thirtyfour months procured in the seas of Asia, or gathered on the coast, or in the lands of Guiana.

At a later period, it was sent from Cayenne to Martinique, and from France to Gaudaloupe; also to Senegal. The numerous plants which are already disseminated in the divers climates of Africa, America and Europe, have all been produced by the two individual plants, which were brought by M. Perrottet from Manilla.

The Morus Multicaulis differs from all others, in the uncommon vigor of its growth, and the facility with which it is propagated from layers, or even from cuttings; also, from the remarkable size which the thin, soft and tender leaves speedily acquire, and the promptitude with which they are renewed. The fruit, which was unknown even in France till 1830, is long, black, and of appearance sufficiently beautiful; its flavor good, being intermediate between that of the red and that of the black mulberry. The silk which the worms form, from the food afforded by this plant, is not only of superior quality, but the cocoons are of unusual size. The leaves, from their extraordinary dimensions, being gathered with important economy of labor, and of time, and from their superior nutritious qualities, they are preferred by the insects to all others.

This mulberry should be cultivated in hedge rows, and never suffered to rise higher than 7 or 8 feet. But a few years are sufficient to raise considerable fields of them in full vigor, sufficient to support an immense number of silk worms; and regular plantations can be formed, by planting the trees at the distance of from six to eight feet asunder; or in rows ten feet asunder, and the trees of five feet distance in the row; a space sufficient for the extension of the branches, sufficient also for cultivation, and for the greater convenience of gathering the leaves. So greatly is this last operation facilitated by the flexibility of the stalks, and the superior size of the leaf, that as we are assured by M. Perrottet, a child is sufficient for gathering the food for a large establishment of silk worms.

The Morus Multicaulis, since its introduction to France, seems destined to replace every where

the common white mulberry for the nourishment of silk worms; such is its decided superiority over all others.

The prediction of the late Dr Pascalis, in 1830, that "after the discovery of this plant, a doubt no longer exists, that two crops of silk may be produced in a single season"; this prediction has since been accomplished — its truth fulfilled by experiment — the soil and cultivation, the habitations for the successive generations of silk worms being yet the same, all thus converted to *double* use, and the production of a *two fold* harvest,— it will be obvious that the actual profit, thus augmented, must be manifold.

SOIL, SITUATION AND CLIMATE.

Although the mulberry flourishes most luxuriantly in a moist and rich soil, and protected situation, yet the leaves which are produced in such soils, are more crude, and not of a quality so nourishing. The growth of the tree in such soils and expositions, besides being more rapid, is prolonged to a later period in autumn, or until suddenly arrested by frost; and the immature wood of a forced growth being more tender, is consequently more liable to be killed by early frosts and winter. Such appears to have been the case in the winter of 1831, '2, which destroyed so many full grown orchards and trees of the hardiest description, even to the root. The ravages of that destructive winter, like that of our last, seem to have been confined to particular situations and soils — to the productions of the forced growth, of a summer not less uncommon and extraordinary

This mulberry braves the most rigorous winters of France. Of this important fact we have indisputable testimony; even of the uncommonly severe winter of 1829, '30: it has there been acclimated, even to the extreme north, as far as Havre; and where it has been cultivated by M. Eyries, from its first introduction to that country.

We distinguish between trees and plants which grow in a state of nature, and those growing in a state of artificial cultivation. In a state of nature, and in the shade and protection of the forest, or of herbage, the growth of the young seedling tree, during the first year, is indeed slow, but the young plant finishes its growth for the year, and attains to a ligneous consistence, and the wood completely matures in *due season.*— While in a state of cultivation, the growth is prolonged, and the wood immature; it meets the frosts of autumn and of winter *unprepared*, and even the young seedling plants of the plum and pear, the quince and the cherry, whose growth has been by art forced on, must be, in our climate, by art protected on a naked and defenceless soil. The same protection, during the first winter, is alike required to the young plants of the Morus Multicaulis, so valuable, the layers of but a single summer's growth, which are separated in autumn.

Even some of the hardiest trees of the forest, require protection in our climate, during the first winter, in a state of cultivation so opposed to nature; they find not in a highly cultivated and naked soil, that essentially necessary protection at the roots which they always find in their own native forests. The danger in this case becomes four-fold from these several causes combined.

The destruction to young and delicate trees and plants, which is sometimes occasioned by winter, is caused by the alternate freezing and thawing of the earth *at the surface.* The frost, by its expansive power, operating as a girdle by compression, death assails at the surface, and the top dies as a consequence. The bountiful covering of moss, and herbage, or leaves, with which provident nature clothes the earth, being amply sufficient to modify the growth of the plant, and to defend at the roots. This protection, like the fleecy snow, being two-fold; it defends alike from the blasts of sudden and excessive cold, also from the still more destructive and pernicious rays of the sun.

Since the introduction of the Morus Multicaulis to New England, in 1831, this tree has had to contend, even in its young and tender age, with two winters, such as were never before recorded in the memory of man, or in the annals of our country; winters doubly severe and destructive, and with augmented power to kill.

Yet, during the last winter, and where the thermometer had descended from 30 to 40° below 0, and in various parts of New England, and in situations the most bleak and exposed to cold winds, the Morus Multicaulis, the well established plants of three or four years of age, in suitable soils, have borne the trial, with power to withstand, defying the storms and the piercing cold, even such a winter as this.

Others there might be, those of younger growth, and those especially, which late in autumn had been transplanted to new positions — or, the forced trees of but a single summer's growth, defenceless, unprotected, and all exposed, on an unsuitable and naked soil, which the winter overcame; causing them to suffer even unto death, and to share the fate of those other trees, of other kinds and species, of a mature and hardy age, which the same dreadful winter had killed.

The proper soils for the Mulberry trees are '*dry, sandy, or stony.*' And trees growing on dry, sandy or stony soils, and situated on the open plains, and on hills the most exposed to cold winds, will be found to suffer least of all from the destructive frosts of autumn and of winter. With all authors, I must agree in recommending a soil of but moderate fertility; and least of all, a cold, moist and heavy soil, or even a very rich soil. A dry soil,

or a friable subsoil, on gentle elevations, or declivities, being the most suitable of all for the Mulberry from China. WM. KENRICK.

Newton, Mass., Oct. 6, 1835.

[For Fessenden's Silk Manual.]

Transplanting Mulberry Trees, &c.

What would be the proper season for taking up, transporting, and setting out young trees (Morus Multicaulis) from the Northern States to the Southern, — say the latitude of New Orleans, Mobile, Pensacola, or St Augustine? Will the Editor of the Manual be so good as to give us an article on this subject in the next number?

GEO. L. CROSBY.

By the Editor.— We believe that either Fall or Spring will answer for transplanting mulberry trees as well as all other trees. Mr Cobb says, "I prefer transplanting in the Spring." * "In France they transplant just after the fall of the leaf in the autumn." † The following, from Mr D. Stebbins, of Northampton, Secretary of the Hampshire, Franklin and Hampden Agricultural Society, contains useful hints relative to transplanting, and infers that Autumn is to be preferred. "In setting out your mulberry trees," says Mr S. "I should recommend that you head them down to within four or six inches of the ground, and the sprouts from the roots will, *next spring*, grow with great vigor. I have, in my nursery, evidence of the fact, and also that the new tree from the root has grown a greater height than those not headed down. It requires all the nourishment of the root to support the old stalk, and it also looks old and unpromising, but the new shoot looks young and vigorous.

"I have one or two thousand yellow locusts of four to eight feet in height to set out, and intend to head them down before setting; having, for five years past, been setting out the whole stalks to no profit of increase. The importance of heading down is acknowledged by our best gardeners here."

Massachusetts Silk Company.

An association of gentlemen of this city and vicinity, under the above title, with a capital of $100,000, have purchased a large tract of land in Framingham, Mass., 20 miles from this city, on the Worcester rail road, and they have 100,000 trees of the White Mulberry, and 10 to 20,000 of the Morus Multicaulis trees, which are to be set out; and, with the future addition of trees, will form a large plantation. They have made a selection of an unrivalled location, and there is every reason that the Silk business, under the direction of the gentlemen interested, will succeed, and be a source of profit to themselves and a great benefit to the country. A plantation of 150 acres of White Mulberry trees, at six years of age, will produce 20 to 25,000 lbs. of raw silk annually, which, at $4 per lb., will amount to the enormous sum of $100,000.

* Cobb's Manual, p. 16. † Rush's Manual, p. 45.

ECONOMY AND COMFORT.—As the season has arrived when every proprietor must procure shoes for his slaves, we think it not amiss to publish the following recipe for making an elastic paste with which to saturate them. The tendency of which is, first, to make them perfectly water proof; secondly, to make them last as long again as they would without its use; and, thirdly, to make the hardest leather soft and pliant, and therefore more easy and comfortable to the feet. We have said that it will make the leather perfectly water proof, and in so saying we speak from experience, having gunned in a pair of boots saturated with this mixture for years from early dawn till near night, day in and day out, during each return of the woodcock season, the better part of which time we were half knee deep in mud and water, and came out with our stockings as dry as when we entered the willow bottom. The following proportions will answer for fifty pairs of shoes.

Take 3 oz. gum elastic, cut it up into fine shreds, put it into a gallon jug, add to it 3 quarts of *Seneca* oil, let it stand three or four days, when the gum will have been dissolved, and the paste fit for use. Stir before using; then rub the uppers and soles of the boots or shoes well with it three or four different times before the fire, whilever the leather will absorb it. The degree of comfort which this mixture will ensure to the wearer of heavy shoes and boots can only be realized on trial. It might be used with an equally good effect upon the harness and gearing of work horses, and we have no doubt would make one pair last as long as two.

Having given this recipe we feel it due to candor to say that the merit of its discovery belongs to Mr Gideon B. Smith, of this city.—*Baltimore Farmer.*

A SQUASH.—The N. H. Gazette says that a squash of the Canada species, was raised in the garden of Wm. Stinson of that town, this season, that weighed *two hundred pounds* and was sold for *five dollars.* Mr Stinson, adds the Gazette, is in his own person, a tolerably decent edition of Daniel Lambert—and we wonder not that every thing about him thrives.

The Worcester (Mass.) Spy, says:—John Porter, of Sterling, has this year gathered from a single vine, twelve good ripe pumpkins, weighing, in the aggregate, 286 pounds, averaging about 22 pounds each. The vine was of spontaneous growth, and received no attention during the season.

Snow fell October 1, to the depth of half an inch, in Montrose, Susquehanna county, Pennsylvania.

A MAN OF THE OLDEN TIME.—On Wednesday, the 23d ult. Moses Brown, the venerable Friend, entered upon his ninety-eighth year. He is, I believe, the oldest individual in this city, where he was born, and where he has passed his long, and useful, and happy life. The regular monthly meeting of the Society of Friends occurred on the forenoon of the same day. In compliance with his almost invariable practice, he was found in his place on that occasion, manifesting his habitual interest, and taking an intelligent part in the deliberations and acts of the meeting. At dinner he was surrounded by several of his family connexions and familiar friends. In that group, however, there was neither wife, nor brother, nor son, nor daughter, to extend to the patriarch the hand of congratulation, or to revive, with anything like a cotemporary interest, the memories of the distant past. All these he has outlived! Of his lineal descendants, only one grand daughter and three great grand children are now living. He was the youngest of four brothers, and in early life his constitution was thought to be so delicate as to give little hope of a long life. Indeed, to quote his own language addressed to the writer of this notice, on the recent anniversary of his birth day, he would gladly have compromised, had it been in his power, for a life extended to the term of *sixty years!* The last of his brothers he has survived more than thirty years.

On the afternoon of his recent birth day, several of his collateral kindred and personal friends paid him a visit, to congratulate him upon his reaching another mile stone in his long journey with powers of body and mind, which leave him still capable of usefulness, and alive to enjoyment. He received them with much kindness, rising from his seat on the sofa, as each one advanced to greet him; he conversed familiarly upon various topics connected both with the past and the present; and in no instance did he lapse for a moment either into the garrulity or the torpor of age. He betrays in fact no symptoms of senile dotage, and in proof of this it may be mentioned, that he not only is an efficient supervisor of the Friends' Yearly Meeting Boarding School in this city, but that for years he has been and still is the Treasurer of that important and richly-endowed institution. The duties of this responsible office he discharges with great exactitude, without the aid even of a clerk to perform the ordinary labors of an accountant. To what causes may this extraordinary exemption from the almost inevitable infirmities of life thus prolonged be ascribed? I pretend to offer no philosophical solution of the phenomenon. As a plain man however, I answer, that Moses Brown owes his remarkable longevity and the healthy action of his mental powers, mainly to three causes — first, to temperance and regularity in his habits of living — secondly, to the influence of his peculiar religious faith and practice, in preserving its votaries from the agitation of the passions, from an exhausting solicitude to win the high prizes of life, and from a voluntary servitude to fashion and to pleasure — thirdly, to the fact that he has never suffered his faculties to rest from want of use; that he has exerted them constantly upon subjects fitted not only to maintain their true balance, but to recruit their decaying strength, and to ensure to them after the lapse of nearly one hundred years no little of the practical efficiency which is but too generally the exclusive possession of those over whose natural force time has achieved no triumph.—*Providence Journal.*

THE OUTA SNAKE.—Before we quitted Chuor, our dandies, who had kindled a fire on the bank of the river, were dressing their rice and curry, when a small snake, approaching the place where they were seated, one of them arose and despatched it with a piece of bamboo. It was about 25 inches long, entirely white except the top of the head, which was a deep shining black. This particular species is called by the natives the Outa snake. It is very rare, and of peculiar habits. These creatures always go in pairs, and it is remarkable that if one is killed by man or beast, the survivor will follow, until it is either destroyed or obtains its revenge by biting the author of its bereavement. It has been known, under such circumstances, to keep up the pursuit with the most patient perseverance for 300 miles. The little creature whose mate was killed by one of the boatmen, was seen after we had pushed from shore, gliding along the bank of the stream in a direct line with our boat, and when we reached Cownpoor, there we found it ready to deal its vengeance upon the wanton destroyer of its conjugal felicity. It was despatched before it could put its evil intent into execution.—*Scenes in India.*

ESSENCE OF ANCHOVY.—Put as much water into a stewpan, on half a pound of the finest anchovies, as will make, with their liquor, the quantity of nearly three pints; with a little scraped horse-radish, a small sprig of thyme, three or four chopped shallots, a blade of mace, about a dozen pepper-corns, a few bits of lemon-peel, a gill of good beer, with a little sugar, or half a gill of red port, and half a gill of either the best ketchup or soy. After the whole has boiled together for at least a quarter of an hour, rub it with a wooden spoon through a fine sieve; and, when quite cold, put the essence up in bottles, and keep it closely corked for use. This excellent essence will remain good for a long time.

[From the Albany Cultivator.]

PRESERVING MEATS.

The intrinsic value of salted meats, whether for family use or for market, depends materially upon the manner in which they are preserved. An excess of salt renders lean meats, as beef and hams, hard, tough and impalatable, besides destroying much of their nutritious properties; while too little salt, or an equivalent of some other antiseptic, will not preserve them in a healthful state. It is as easy and as cheap to preserve meats well, as it is to do it badly, if we are furnished with good rules, and duly observe them. There are no doubt many rules adapted to this end. We have tried many, and have finally, for some years, adopted, with perfect satisfaction, for family use, the pickle which we give below, for the curing of beef and hams. It is said to be equally good for pork, though we have not used it for this purpose, as we lay down none but the fat part of the hog, which is not injured by an excess of salt. This has been denominated the

Knickerbocker Pickle.—Take 6 galls. of water, 9 lbs. of salt, 3 lbs. coarse brown sugar, 1 quart of molasses, 3 ounces salt petre and 1 oz. pearlash: mix and boil the whole well, taking care to skim off all the impurities which rise to the surface. This constitutes the pickle. When the meat is cut it should be slightly rubbed with fine salt, and suffered to lay a day or two that the salt may extract the blood; it may then be packed tight in the cask, and the pickle, having become cold, may be turned upon and should cover the meat. A follower, to fit the inside of the cask, should then be laid on, and a weight put on it, in order to keep the meat at all times covered with pickle. The sugar may be omitted without material detriment. In the spring the pickle must be turned off, boiled with some additional salt and molasses, skimmed, and when cold returned to the cask.

For domestic use, beef and pork hams should not be salted the day the animals are killed, but kept until its fibre has become short and tender, as these changes do not take place after it has been acted upon by the salt.

Meat that is to be dried and smoked, requires less salt than that which is to remain in pickle, on account of the preserving qualities of the pyrolignic acid, which is supplied by the smoke of the wood. The great art in smoking meat well seems to consist in having the meat dried by smoke, and not by heat. The hams of Westphalia, and the smoked beef of Hamburgh, which are unrivalled in reputation, are managed in this way. The Westphalian farmers have a closet in the garret, joining the chimney, made tight, to retain smoke, in which they hang their hams and bacon to dry, out of the effect of the heat of the fire. Two apertures are made from the closet into the chimney, and a place is made for an iron stopper to be thrust into the funnel of the chimney, to force the smoke through the lower hole into the closet. The upper hole must not be too big, because the closet must be always full of smoke, and that from wood fires.

The Hamburgh method of making their superior smoked beef is this: Fires of oak chips are built in the cellars, from whence the smoke is conveyed by two chimnies into the fourth story, and thrown into a chamber by two openings placed opposite to each other. The size of the chamber is proportioned to the quantity of meat to be smoked, but the ceiling is not raised more than five feet and a half from the floor. Above this chamber there is another made with boards, into which the smoke passes through a hole in the ceiling of the first, whence it escapes by openings formed in the sides. The pieces of meat are hung up at the distance of a foot and a half from each other, and a fire is kept up night and day for a month or six weeks, according to the size of the pieces.

[From the Farmer and Gardener.]

RIBBON GRASS.

PLAINFIELD, Windham co., Ct.

Dear Sir: I received a letter from you, a short time ago, requesting information concerning the ribbon grass [Phalaris Americana]. The grass you saw at Plainfield, on Mr Woodward's farm, two years since, I was informed originated from the ribbon grass. It was originally cultivated in the garden for ornament, where it spread, to the great annoyance of the vegetables. Mr W. became dissatisfied with it, dug it up, and threw it over the wall into the mowing lot, where it continued to grow luxuriantly. Being determined to get rid of it, he again took it up and threw into the brook. It was so tenacious of life, that it seized upon the watery element and spread rapidly down the brook, so that in a few years it extended down the brook more than a mile; its progress towards dry land was more slow, but has eventually spread over a number of acres, converting a bog meadow into the best of mowing. Mr Bowen, who lived on the farm, informed me that he mowed it twice in the season, and that it produced about three tons to the acre, annually, of excellent hay, which the cattle consumed with as much avidity as any that was cut on the farm.

The meadow was so miry in many places, that cattle could not pass, but the grass roots formed such an impenetrable surface, that they could cart over it, in getting hay without difficulty; and, in some places, they entirely united across the brook, forming a natural bridge that a person might pass over. The brook is sufficiently large to operate a cotton factory which has been erected about a mile below.

I have taken considerable pains to ascertain the history, character and importance of the ribbon grass, and come to the conclusion, that it was originally an aquatic grass, and that the striped color was produced by being transplanted into a dry, gravelly soil. I have seen it in a number of places where it had been cultivated for ornament, spreading beyond its boundary and outrooting other grass: in these instances, if in the shade or on moist ground, it loses its striped color. In one instance, the roots passed under the garden wall into the back yard, and entirely eradicated the other grass, and occupied a number of rods of ground, when it grew rank and lost its striped color. I have not been able to ascertain the best mode of propagation; it produces little if any seed that will vegetate. The striped grass of the garden, I am confident, does not produce any; for we have cultivated it for near twenty years, and have never known a single spear that was produced from seed. The Phalaris that grows in wet land, blossoms abundantly, but produces very little seed, and that is liable to become fungus, resembling the spurred rye. The propagation by transplanting the roots into wet land among the bogs, although attended with but little labor, must take considerable time to entirely eradicate the bog grass, as I have proved by experiment. I transplanted, a number of years since, into a bog meadow, some of the grass, and although it took root and grew rapidly, spreading among the other grass, and even sending up shoots in the centre of bogs, still the bog grass remains. I planted, as an experiment, about one half of an acre bog meadow with the Phalaris a year last spring, it having been previously ploughed for two or three years; it was planted four feet apart each way; it all lived, and is spreading well, and probably in a few years will occupy the whole ground. I have ploughed up one acre more, and intend to plant it in the same way. I also sowed some of the seed last spring, procured from grass that grew on wet land, but am not certain that any of it has come up. Shall sow more next spring, and hope in a few years to be able to ascertain its importance, and the best mode of cultivation. Yours, with respect,

ANDREW HARRIS.

Hon. Elizur Goodrich, Jr.

SELECTION OF SEED WHEAT.—The selection of good seed of any kind, to plant or sow, is an object of no small importance to the cultivator, and we accordingly find farmers, who are careful, pursuing some plan or other which shall ensure them the best seed for their sowing. In the case of wheat, some select the largest and best ears or heads, which they can find, others throw up their wheat in a windy day, and select that which is blown the least distance, as being the heaviest and most plump. We think, however, that the best plan, and the one which will be most sure to give the heaviest grain, is to put it into some thick liquor and take those kernels which usually sink to the bottom. Liquors may be made sufficiently thick to bear up an egg, by various substances in them, by potash, as in common lye — by soap or by salt. Darwin recommends a solution of salt sufficiently strong to bear up an egg, and the wheat plunged into this. This might be done at the time of sowing, or even before, if the wheat wet in it be carefully dried — but at sowing time, when it is common to soak or wash wheat in lye it would be a small matter to make the liquor as strong as possible, and thus select the heaviest and best of your seed while preparing it for the ground. It would be but a little labor to test the plan on a small quantity and ascertain the facts concerning it.—*Maine Farmer.*

TO CORRECT MUSTINESS IN GRAIN.—Corn which is housed without being thoroughly dried, or which is stored in a damp place, acquires a musty smell and taste, which render it unfit for the customary uses; but as this alteration affects only the outer covering, and not the substance of the kernel, it may be easily removed by throwing upon the grain double its weight of boiling water, carefully stirring the mass till the water becomes cold. The spoiled kernels, which swim upon the top, must then be removed, the water poured off, and the grain spread to dry. M. Peschier preferred employing for this purpose boiling water rendered slightly alkaline, and afterwards washing the grain in pure water. When corn has been heated, or manifestly injured, the vegeto-animal portion is almost always changed: the farina will not ferment well, and the bread made from it is unwholesome: such grain will answer for starch.—*Chaptal.*

From the Albany Cultivator.

PRESERVING ROOTS.

We find in Chaptal's "Chemistry applied to Agriculture," an excellent chapter on the preservation of animal and vegetable substances. We extract the following from the preliminary remarks.

"The nature of all bodies which have ceased to live or vegetate, are changed, as soon as the physical or chemical laws, by which they are governed, cease to act; the elements of which they were composed, then form new combinations, and consequently new substances.

Whilst an animal lives, or a plant vegetates, the laws of chemical affinity are continually modified in its organs by the laws of vitality; but when the animal or plant ceases to live, it becomes entirely subject to the laws of chemical affinity, by which alone its decomposition is effected.

The principles of the atmospheric air which is imbibed by the organs of living bodies, whether animal or vegetable, are decomposed and assimilated by them, whilst dead bodies are decomposed by its action. Heat is the most powerful stimulant of the vital functions, yet it becomes, after death, one of the most active agents in the work of destruction. Our efforts, then, for the preservation of bodies, ought to be directed to counteracting or governing those chemical or physical agents, from the action of which they suffer; and we shall see that all the methods which have been successful, are those which have been formed upon this principle.

The chemical agents which exert the most powerful influence over the products of the earth, are air, water and heat; the action of these, however, is not equally powerful over all classes of plants; the soft and watery, and those which approach the animal matter, decompose most readily; the principles of such are less coherent, less strongly united than that of others; so that the action of disorganizing agents upon them is prompt and effectual.

All the methods now employed for the preservation of bodies, consist in so far changing their nature, as to deprive them of the elements of destruction contained within their own organs: or in secluding the substances to be preserved from contact with the destructive agents mentioned in the preceding paragraph; or in causing them to imbibe certain other substances, the anti-putrescent qualities of which counteract all action, whether of internal or external agents.

In all vegetable products, water exists in two different states, one part of it being found free, and the other in a state of true combination; the first portion, not being confined except by the covering of the vegetable, evaporates at the temperature of the atmosphere; the second is set free only at a temperature sufficiently high to decompose the substances containing it: the first, though foreign to the composition of the vegetable, enters into every part of it, dissolving some of its principles serving as a vehicle for air and heat, and being converted by cold into ice; by these several properties it greatly facilitates decomposition: the second portion, from which no evil of the kind arises, is found combined and solidified in the plants, and its action is thus neutralized."

Drying fruits, then, in order to preserve them, consists in depriving them of the water contained in them in a free state. This may be done by subjecting them to heat, not exceeding 95 or 113 degrees; either by exposing them to the sun, or in a stove room, or in ovens, which latter practice is resorted to, even in the warmest countries, at the commencement of the drying process. In preserving the apple, for instance, our author adds, that by depriving their surface of all moisture before putting them up; keeping them in dry places, where the temperature will be constantly between 50 and 54 degrees, and by separating the fruits that they shall not come in contact, they may sometimes be preserved 18 months. The farmer in Schoharie, who has been in the habit of bringing the Spitzenberg to our market on the 4th of July, owes his success to the observance of these rules.

On the preservation of the fruits of the earth by secluding them from the action of air, water and heat, M. Chaptal enumerates the following leading causes of decay.

"The atmospheric air, coming in contact with fruits, deprives them of their carbon, and forms carbonic acid.

Fruits exposed to the solvent action of water suffer decomposition, by having the affinity existing between their constituent principles weakened, and at length destroyed.

Heat dilates the particles of bodies, and thus diminishes the force of cohesion and attraction, and favors the admission of air and water.

The combined action of these three agents produces very speedy decomposition; the effect produced by any one of them is slower, and the results different. So that in order to preserve fruits from decomposition, it is necessary to guard them from the power of these three destroyers."

Practically applied, these axioms teach, that to preserve roots in good condition, the following precautions should be observed:

1st. That their surfaces be entirely freed from moisture before they are housed or buried, and that they be deposited in a dry situation, where water will not have access to them.

2d. That they be excluded from the air, by burying them in dry earth, or slightly covering them in the cellar with earth. And

3d. That they be kept in a cool temperature; the best ranging from 34 to 45 degrees.

We frequently hear housekeepers complain, that their potatoes, turnips, and other vegetables soon deteriorate, and lose their fine flavor, after they have been a short time in their cellars. This is a natural consequence of the injudicious way in which they are too frequently kept: exposed to the atmosphere, and to a high temperature, in a cellar adjoining the kitchen, or perhaps in the kitchen itself. Again, potatoes or turnips buried in a wet condition, or the latter with parts of their tops left on, are very liable to ferment and spoil. We find it to be a necessary precaution in burying turnips, to make one or more holes in the crown of the pit, to let off the rarified air, and abate the heat which is almost invariably generated on their being buried.

In preventing the total loss of potatoes that

have been effected by frost, Thomas Dallas directs, that when they are slightly touched by the frost, it is only necessary to sprinkle the roots with lime to absorb the water under the skin; that when the outer portion of their substance is frozen, the tubers may be pared and thrown for some hours into water slightly salted; and that when they are wholly frozen, they will yield, upon distillation, a spirituous liquor resembling the best rum, and in greater quantity than roots which have not been frozen.

The quotations we have made above are invaluable to the farmer and house-keeper; and if the principles which they establish are understood and practised upon, we shall have no cause to regret the length to which we have extended this article.

Mulberry Trees. We are informed that the Rev. J. Parker has on his premises near the Meeting House, in Southborough great numbers of Mulberry trees of different ages and of different sorts suitable for ornament, for fruit or for feeding silk-worms. We are glad to hear that such an establishment exists, in addition to others, in this vicinity, and hope the public as well as the proprietor, will be thereby benefitted. The plants can be sent to the Worcester Rail Road about two miles from the nursery or taken from the nursery at the option of purchasers.

Apalachicola is a flourishing seaport situated advantageously at the outlet of the river of the same name and within St George's sound, protected by St Vincent, St George and Dog Islands: under these last lay the vessels of larger burthen. Those of 11 feet water come within four miles of the town, and 8 to 9 feet can be received at the wharves. During the active season, 13 steamboats plied in the rivers as far as Columbus, in Georgia, transporting upwards valuable merchandise, and downwards 37,000 bales of cotton for exportation from this port—the quantity of both and consequently the business will be considerably increased the ensuing season, probably to the extent of 60,000 bales.—*Commercial Gazette.*

A young mechanic of Woburn, Mass. has invented a machine to peg boots by water. The machine is a very neat piece of work, and is said by good judges, to be a superior invention.

We examined a few days since (says the New York Commercial Advertiser) a machine for making pins by steam power, which was in operation at the factory of R. Hoe & Co. The machine is one of the most ingenious pieces of mechanism we have ever seen; it completes sixty pins per minute, and they look better and more perfect than those manufactured in the usual way.

Vermont sheep and wool.—The writer has noticed a paragraph going the rounds of the papers, in which it is stated that there are in Vermont twenty millions of sheep, producing wool of the annual value of four millions of dollars. The statement was so absurd, that their appeared no necessity for contradicting it, but as it has been so often repeated, it may be well to give the actual facts.

The number of sheep in Vermont does not much exceed eleven hundred thousand; the produce in wool is three pounds to the sheep, and the average price of the wool is sixty five cents the pound. The whole annual value is therefore a little more than two millions of dollars. The pure Saxony sheep, of which the number is not very great, produce about two and a quarter pounds; the mixed Saxony and Merino about two and three quarter pounds; the Merino about three pounds; and the mixed Merino and native, about three and a half pounds to the fleece. The average annual expense of keeping sheep in Vermont, is rather less than one dollar the head.—*Dai. Adv.*

Recipe for making vinegar.—You have copied from the American Farmer into your paper, vol. 4th, page 364, "short directions for making vinegar," which are as follows:

"To 10 gallons of rain water add one gallon of molasses and one of brandy — mix them well together, and place the cask in a garret or some dry warm place, and occasionally shaking it, in a few months it will be fit for use."

Twelve gallons of the above mixture will cost as follows, viz:

1 gallon molasses	$0 50
1 gallon brandy (adulterated whiskey)	1 50
	$2 00

I would propose a much cheaper way for families to be supplied with this indispensable article, viz:—

Take one barrel of cider — pure juice of the apple — divide it into two parts; add one gallon clean rain water to each part, place the casks and treat them as above directed, and you will have thirty gallons of vinegar, of superior flavor and much more enduring body than that made of whiskey and molasses, and at the same or a much less price. The advantage of dividing the quantity is that it will be sooner fit for use.—"*Obvious*" *in Geneseee Farmer.*

In Missouri they have no parsnips. They frequently plant them, but they strike so deep that the rogues on the other side of the globe lay hold of the roots and pull them through, so that the labor and crop is lost to the rightful owners!

Disbanding Silk from the Reel.

We have already spoken of the importance of good reeling; but in order to ensure a good article, care must be taken in disbanding the silk from the reel. The single fibres of which the thread is composed, are liable to different degrees of stretching as they are wound from the cocoons. This, however, depends much upon the assorting of the cocoons — if they are well assorted, the degree of extension will be less than if poorly or carelessly assorted. Care in assorting, however, will not wholly overcome the difficulty, because some are necessarily longer in the water than others, and therefore yield their silk more readily. The weak latter ends of some cocoons also wind off with the strong first part of others. The consequence of this is, the fibres are unequally stretched, and (if taken from the reel too suddenly) those that are most stretched will contract the most and make a thread less compact and firm.

To remedy this, let the skein remain on the reel six or eight hours, or until it is dry and the different fibres brought to a more uniform degree of extension. This also gives the fibres an opportunity to unite more firmly. After the skein is completely dry and ready to be taken from the reel, squeeze it together all round to loosen it upon the bars; and then with a thread, made of refuse silk, tie it in the places where it bore on the bars of the reel. It may then be slid off the reel, and ties should be made opposite to those first made. It should then be doubled, and tied near each extremity, and laid by for use or sale. When the skein is finished, a mark should be tied to the end of the thread, otherwise it may mix with the threads of the skein and render it difficult to find it.—*Silk Culturist.*

Bituminous coal in massachusetts.—The Taunton Gazette states, on the authority of a letter from Mansfield, that a bed of bituminous coal has been discovered, on the land of Mr Alfred Harden, in that town, about half a mile from the Providence Rail Road. It was discovered, in digging a well, ten feet below the surface of the ground, the vein being more than six feet in depth. It is added that a blacksmith in the neighborhood has made trial of the coal, and pronounces its quality to be good.

American silk goods.—We were on Monday shown by Charles Dyer, Esq. of Providence, a number of beautiful patterns of Silk Goods, manufactured at his establishment in Cranston, R. I. Mr Dyer informed us that several important improvements have been made recently in the looms used for weaving Silk, and that it is calculated as soon as a sufficient quantity of cocoons can be obtained, the weaving of silk will be prosecuted on a more extensive scale than has been done heretofore in this country.

Several specimens of the above goods have been left at the Commercial Insurance Office for inspection.—*Prov. paper.*

Peas.—The Charleston Courier states that a quantity of a new species of pea has been imported from Cuba, by Dr B. B. Strobel, of that city, and placed in the publication office of the Southern Agriculturist, for gratuitous distribution, with a view of introducing the culture into the United States. It is a native of Old Spain, and is called the *Garvanza* or *Braganza*. Peas of this kind yield in old Spain 300 bushels to the acre; they sell ripe in Havana market for from $1 to $1 50 per bushel. They are excellent for soups, are larger than even the marrowfats, and are said to be better cooked in the same way.—*Middletown Sentinel.*

Preservation of Straw.

Mr Tucker:—The time for threshing grain having arrived, I will give you a statement of my manner of saving and feeding straw, agreeable to your request in the 5th number of the current volume of the Farmer. Previous to commencing threshing, I go to a hay stack, and twist a quantity of bands from 6 to 10 feet long, which are placed at the barn door, and when the straw is raked to the door two men take a band and stretch it over the bundle of straw, then run each a hand under the straw, and turn it over endwise on to the band, when one of them fastens the band, and the other prepares another band; and in that manner two men will bind as fast as the swiftest machine will thresh, and the straw is stacked as securely as wheat, and in one-fourth the time required when not bound, and the foddering as performed with much less labor; and if cut, (is it should be) that operation is much facilitated. When my stock comes to the yard, I commence foddering my straw, and do not allow them to taste a lock of hay until the straw is entirely gone. The cause of the failure of so many in feeding straw, is their fears that the cattle will starve, and they give them a good foddering of hay once a day, which entirely prevents their eating straw; and as the hay is not sufficient to keep them in heart, the cattle of course become poor, and it is charged to the straw. I repeat they must not taste a lock of hay, neither must they be compelled to eat the straw clean, as a good bed is essential to their good condition. I shall cut my straw the coming season, and feed in mangers. Lambs and yearling sheep will not do well on straw uncut.—*Genesee Farmer.*

Paul Strong, of Northampton, picked from a vine of spontaneous growth, 361 lbs. and 6 oz. of ripe and unripe pumpkins: vine's length, 358 ft.

[From the Delaware State Journal.]

SILK.

The silk business is becoming an object of earnest attention in this country. We question whether any portion of it, is better adapted to the business than our own State. We mean that part of the business which relates to the production of the raw material — the cultivation of the mulberry tree and the raising of cocoons. The soil and temperature of Kent and Sussex counties are believed to be admirably adapted to it. It is a business which requires scarcely any capital but the soil itself. The raising of cocoons is but a simple process, which any housewife, nay, young boys and girls who do nothing else, may easily manage. The spinning and reeling would be an agreeable employment for the elder girls. Mulberry trees can be easily obtained, and when two or three years old, furnish abundant food for worms. The employment combines the recommendations of being healthful, agreeable and lucrative. The silk manufacture will undoubtedly become a great business in our country, and our farmers' wives and daughters will, in a short time, find as ready a sale for their cocoons, as the farmer does for his wheat and corn. A farmer, with competent means, who would introduce the mulberry tree in Kent or Sussex county, and, by his example and influence, induce others to engage in the business, would be a benefactor to his neighborhood. He might be the instrument of superinducing a most lucrative and valuable employment, which would interfere with no other occupation, and the profits of which would be clear gain to the State. It would interfere with no other business, because the trees, when once planted, require little further attention, and need occupy no ground which would be otherwise appropriated; and because also, the plucking of the leaves and feeding of the cocoons could be all performed by young boys and girls, who have nothing else to do. In a moral and intellectual point of view, if the business should become general, it would be of inestimable advantage to the rising generation, by teaching them habits of industry at that early period of life, which, in the country, is too often wasted in listlessness and ignorance; and that too by furnishing them an agreeable, healthful and useful employment, suited to their capacity and years, under their parents' eye, and enjoying the comfort and shelter of the parental roof. In short, we know of no experiment, if that may be deemed an experiment which has been a source of wealth wherever it has been undertaken — which more strongly recommends itself to our farmers in Kent and Sussex than this:—we speak of them particularly, because, having all the natural advantages of soil and temperature — and without manufactures or foreign commerce — it would admirably amalgamate with, and agreeably and profitably diversify the monotonous routine and uncertain profits of corn and wheat crops. Let some farmer begin the planting of mulberry trees — plant them about his house, or along his fence, or make hedges of them. They take up no ground which is wanted, and they are growing while he is sleeping. Let him give shoots to his netghbors, until the tree becomes as universal as any of our forest trees. Let him follow it up by raising the cocoon and preparing the silk until it becomes, as it may easily become, a general and lucrative business. Such a man would earn a monument more enduring than brass or marble.

VALUABLE NEW WORK ON SILK.

American Silk Grower's Guide, is this day published at the office of the New England Farmer.—being the art of growing the Mulberry and manufacture of Silk on the system of successive crops each season—by WM. KENRICK, author of the New American Orchardist; 112 pp. price 42 cents, neatly bound in cloth. Booksellers and traders supplied on favorable terms. GEO. C. BARRETT.

MORUS MULTICAULIS.

For sale at the Agricultural Warehouse, 51 and 52 North Market street, any number of Trees of the Morus Multicaulis or Chinese Mulberry. These trees were propagated in this country. The superiority of the foliage of this tree as food for the silk-worm over all other, has repeatedly been tested, and is prov d beyond a doubt The price for Trees, from 4 to 5 feet high is $30 per hundred, $4,50 per dozen, &. 50c single. Trees but 2 or 3, with good roots $25 per hundred.
GEORGE C BARRETT,

BREMEN GEESE.

For sale at the Agricultural Warehouse Bremen Geese and Muscovy Ducks. GEO. C. BARRETT.

GARDEN SEEDS, TREES, &c.

The subscriber is dai y receiving a supply of *Garden Seeds*, growth of 1835, and will execute orders from the South at short notice, for SEEDS of the greatest variety, raised in gardens connected with the *Agricultural Warehouse and New England Seed Store*, Boston, and warranted of good quality.

BOXES OF GARDEN SEEDS containing an assortment neatly papered up in 6¼ cent papers supplied at a discount to Traders, also FRUIT AND ORNAMENTAL TREES, MULBERRY AND MORUS MULTICAULIS TREES.

Agricultural and Horticultural Books, New England Farmer (weekly a $2,50 per annum), Silk Manual (monthly at 50 cts. per annum), Horticultural Register at $2 per annum, published by GEO. C. BARRETT,

LUSTRE FLOWER POTS.

For sale at the New England Farmer Office, beautiful Super Superb Flower Pots.

MORUS MULTICAULIS.

JOSEPH DAVENPORT, of Colerain, Mass. offers for sale 16,000 trees of the Morus Multicaulis, or Chinese Mulberry, being a part of his trees cultivated at Colerain and at Suffield, Ct., 16 miles north of Hartford, one mile from the river. The trees are from 2 to 5 feet high. Price according to size, from 25 to 30 dollars per hundred. Were propagated from trees that endured the last severe winter unprotected. Purchasers will be furnished with a knowledge of its culture and suitable soil, which, if attended to will ensure it without protection against the severity of our climate. Trees will be carefully packed and forwarded by land or water to any part of the country. Orders received by mail will receive prompt attention. Colerain, Oct. 5, 1835

BRIGHTON MARKET,—Monday, Nov. 2, 1835.

Reported for the Daily Advertiser & Patriot.

At Market 2050 Beef Cattle, 1100 Stores, 3840 Sheep, and 1860 Swine. Several lots Stores were at market last week.

Prices—*Beef Cattle*—Nearly all the better qualities of market Cattle were purchased before they arrived at market, at an advance from last week. We noticed a few very fine taken at 34s 6d. Prime at 30s a 32s; good at 27s a 30s; Small Cattle at 18s a 24s.

Barrelling Cattle.—Mess 24s; No. 1. 20s; No. 2 16s 6d.

Stores—Yearlings at $4 50 a 5; two year old 7 50 a 13; three year old $13 a 21.

Sheep—Ordinary at 9s a 10s; middling 10s, 6d, 11s 3d and 12s better qualities 12s 9d, 13s 6d, and 15s; weathers 16s 6d, 18s and 19s 6d; a few corset weathers at $6 each.

Swine—Market quite spirited, nearly all sold and former prices fully supported. Several lots old barrows and large shoats were taken at 6, sows at 5, lots to peddle at 5 for sows, and 6 for barrows. Small lots of selected barrows at 6 1-2; at retail, 5 1-2 a 6 for sows and 6 1-2 a 7 for barrows.

New England Farmer's Almanac For 1836.

Just published by JOHN ALLEN, & CO. Corner of Washington and School streets, up stairs, and by GEO. C. BARRETT at the Seed Store No 51 and 52, North Market Street, FESSENDEN'S NEW ENGLAND FARMER'S ALMANAC for 1836. For sale also by Booksellers, Shopkeepers, &c., generally.

This Almanac will be found one of the most interesting and amusing of the series, of which it composes No VIII. It consists of the usual astronomical calculations, humorous poetical sketches of the months; observations and directions relative to the employment of the Farmer, which will be found appropriate to each month in the circle of the seasons, "*Agriculture and Rural Economy*," including cuts and descriptions of many of the most useful implements employed in tillage. Valuable Recipes; Husbandry Honorable, a pithy piece of paramount poetry. The Splendors of the Setting Sun, a poetical effusion; Aphorisms; Eulogy on the *Art of Agriculture*; Calendar of Courts, Roads, Distances, &c, &c.

VALUABLE WORK ON FRUITS, VEGETABLES, SILK, &c

Just published and for sale by Geo. C. Barrett, THE NEW AMERICAN ORCHARDIST, or an account of the most valuble varieties of fruit of all climates, adapted to cultivation in the United States, with their history, modes of culture, management, uses, &c., and the culture of silk; with an Appendix on Vegetables, Ornamental Trees and Flowers. By WILLIAM KENRICK.

A new edition, enlarged and improved. A chapter on "Climate" another chapter on Modern or Landscape Gardens, —also, a Practical Treatise on Mulberry Plantations, and the Culture of Silk, and the whole Class of Vegetables being now for the first time added and all that relates to them.

1 vol. 12mo. 420 pages elegantly bound. Price $1.

AGRICULTURAL CHEMISTRY.

Chaptal's Agricultural Chemistry, first American Edition, from the French. Just published, price $1,25.

sep. 9. GEO. C. BARRETT.

FARM FOR SALE OR EXCHANGE.

An excellent Farm containing 70 acres, situated in Marlborough, Mass., with a house and barn thereon, for sale, or would be exchanged for property in the city of Boston. For terms and particulars inquire of G. C. BARRETT at this office, or N. B. PROCTOR, Esq of said Marlborough. 6m

PRICES OF COUNTRY PRODUCE.

CORRECTED WITH GREAT CARE, WEEKLY.

		FROM	TO
Apples, new,	barrel	1 50	2 00
Beans, white,	bushel	1 25	1 50
Beef, mess, (new)	barrel	10 50	11 50
Cargo, No. 1.	"	7 50	8 00
prime,	"	6 25	6 50
Beeswax, (American)	pound	22	24
Butter inspected, No. 1,	"	15	18
Cheese, new milk,	"	8	9
Feathers, northern, geese,	"	46	50
southern, geese,	"	41	45
Flax, American,	"	9	10
Flaxseed,	bushel	1 37	1 50
Flour, Genesee, cash	barrel	6 25	6 50
Baltimore, Howard street,	"	6 37	6 62
Baltimore, wharf,	"	6 25	6 37
Alexandria,	"	6 50	6 62
Grain, Corn, northern yellow	bushel	1 07	1 10
southern yellow	"	1 05	1 07
white,	"	1 03	1 04
Rye, northern, none.	"	95	98
Barley,	"		
Oats, northern, (prime)	"	50	55
Hay, best English, per ton of 2000 lbs		22 00	25 00
eastern screwed,	"	17 00	18 00
hard pressed,	"	18 00	20 00
Honey, new,	gallon		
Hops, 1st quality new	pound	15	17
2d quality	"	12	15
Lard, Boston, 1st sort,	"	11	12
southern, 1st sort,	"	9	10
Leather, slaughter, sole,	"	19	20
do. upper,	"	12	14
dry hide, sole,	"	19	21
do. upper,	"	18	20
Philadelphia, sole,	"	27	29
Baltimore, sole,	"	25	27
Lime, best sort,	cask	1 04	1 12
Pork, Mass. inspect. extra clear,	barrel	21 00	21 50
Navy, mess,	"	16 00	16 50
bone, middlings,	"		
Seeds, Herd's Grass,	bushel	2 25	2 50
Red Top,	"	70	80
Red Clover, northern,	pound	9	11
White Dutch Honeysuckle,	"	25	30
Silk Cocoons, (American)	bushel	2 75	3 00
Tallow, tried,	cwt.	7 50	8 00
Wool, prime, or Saxony Fleeces,	pound	65	75
American, full blood, washed,	"	55	65
do. 3-4ths do.	"	50	55
do. 1-2 do.	"	37	42
do. 1-4 and common	"	40	45
Native washed	"	38	60
Northern pulled. Pulled superfine,	"	55	60
1st Lambs,	"	45	50
2d do.	"	33	38
3d do,	"	25	30
1st Spinning,	"	48	50
Southern pulled wool is generally 5 cts. less per lb.			

PROVISION MARKET.

RETAIL PRICES.

Hams, northern,	pound	11	12
southern, none.	"	11	12
Pork, whole hogs,	"	8	10
Poultry,	"	10	14
Butter, (tub)	"	18	20
lump	"	22	25
Eggs,	dozen	17	20
Potatoes, new,	bushel	50	57
Cider, new,	barrel	1 25	1 75

ORDERS FOR PRINTING RECEIVED BY THE PUBLISHER.